LDWSF
2.7.1-2
9/30/05

Jay Field
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09/30/2005 04:18 PM

To Allison Hiltner/R10/USEPA/US@EPA, Bruce Duncan/R10/USEPA/US@EPA
cc Burt Shephard/R10/USEPA/US@EPA, Lon Kissinger/R10/USEPA/US@EPA, Steinhoff.Marla@mailhub.epa.gov
bcc

Subject Re: Duwamish FWM meeting - Questions & comments

Bruce/Allison,

general comments:
Is the comment on "overprediction" specific to PCB concentrations? It should be clear in the questions that we are asking for data/models for PCB concentrations, not water quality parameters (eg, substitute "PCB concentrations" for "water quality values").

Are more SPMD deployments planned or are we only talking about a single sampling event from early spring? If so, how relevant are these data for summer/low flow PCB concentrations throughout the lower Duwamish? Even if those data could be converted to dissolved concentrations, the information is essentially useless for the food web model.

specific:
#5 for Todd/Lawrence: non-resuspension flux is a process, not a parameter. How important is this process in a tidal river?

#6 What water column PCB data are needed to characterize a spatially heterogenous estuarine river?

For question#3 for KC model presentation: analyte list should also include detection limits

for LDWG: what spatial scale will be used for water column data?

Jay

Hiltner.Allison@epamail.epa.gov wrote:

>I added a few more specific questions on the KC WQ data. On your #9, we
>are not planning to do a fate and transport model at this site, so I'm
>not sure why you're asking this ?
>
>Also, please don't forget to provide written comments on the FWM tech
>memo by COB Friday.
>
>Thanks.
>
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>Bruce
>Duncan/R10/USEPA
>/US To

> Allison Hiltner/R10/USEPA/US@EPA,
> 09/29/2005 12:59 Erika Hoffman/R10/USEPA/US@EPA,
> PM jay.field@noaa.gov, Lon
> Kissinger/R10/USEPA/US@EPA,
> Steinhoff.Marla@mailhub.epa.gov
> cc
> Burt Shephard/R10/USEPA/US@EPA
> Subject
> Re: Duwamish FWM meeting -
> Questions & comments(Document
> link: Allison Hiltner)
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>
>Here is Burt and my first shot for you all to add/adjust - please send
>to me, Burt and Allison.
>
>
>Questions for Todd and Lawrence:
>
>1. What is your opinion on the use of SPMD data to obtain input
>parameter data for the Arnot/Gobas model? How would/could you use it to
>estimate freely dissolved fraction?
>
>2. Which model parameters, in order of importance to the model, are best
>based on site-specific versus literature values?
>
>3. What is your opinion on using overpredicted surface water
>concentrations as input to the Arnot/Gobas-type model? What does this do
>to the perceived relationship between sediment concentrations and fish
>tissues if water concentrations are artificially high?
>
>4. How do you think the Arnot/Gobas-type model can or should be applied
>to a river with a saline tidal wedge?
>
>5. The PRP-proposed conceptual food-web model leaves out
>non-resuspension flux. How important is this parameter in a river with
>saline tidal wedge dynamics?
>
>6. What kind of data are needed for model to be successful (water, or if
>no water data).
>
>
>King County Questions
>
>1. KC MODELERS AT THE MEETING WE HAD A COUPLE OF YEARS AGO STATED THAT
>MODELED surface water concentrations (freely dissolved) IN LDW were
>over-predicted. HOW DO THEY KNO W THIS?
>
>2. WHAT WQ DATA DOES LDWG INTEND TO USE IN THE FW MODEL? MEASURED OR
>MODELED DATA?
>
>3. FOR KC WQ DATA LDWG PROPOSES TO USE IN THE FW MODEL, PLEASE PROVIDE
>THE FOLLOWING INFORMATION AT OUR 10/18 MEETING:
> - NUMBER/LOCATION/DATES OF SAMPLES (PLEASE PROVIDE SPECIFIC

>LOCATION INFORMATION, E.G., DISTANCE FROM OUTFALL, DEPTH IN WATER
>COLUMN, WATER DEPTH AT SAMPLING LOCATION)
> - PARAMETERS SAMPLED, SAMPLING AND ANALYTICAL METHODS
> - DATES/LOCATIONS/PARAMETERS/METHODS FOR ANY UPCOMING SAMPLING
>
>4. HOW WERE SPMD VALUES TRANSLATED INTO WQ VALUES?
>
>2. Clarify exactly which data will be used. Where the data came from
>(year, location, # samples, how input # and variability are derived,
>etc.). Does the ongoing sampling help describe year to year and seasonal
>variability?
>
>3. For freely dissolved concentrations, what are the estimated
>constraints around the values that you select?
>
>
>Questions/comments to LDWG (in addition to the King County questions)
>
>4. Explain in more detail the comprehensiveness of the data set for
>modeling (e.g., water is very limited, sediment is broader)
>
>5. Will the model be used to estimate how long it will take tissues to
>reach risk-based goals after sediment remediation?
>
>6. Provide the POC, DOC data for the LDW
>
>7. Table 3-2: How will you evaluate the influence of the lumping
>assumptions (e.g., that LDW fish consume infaunal and epibenthic
>invertebrates equally? Clarify why phytoplankton collection includes all
>particles <236 um but does not include zooplankton in the literature
>values for phytoplankton? Porewater/bottom water and surface water?)
>
>8. Will the model be able to output the results in mass and
>concentration units?
>
>9. Can Arnot/Gobas model link directly to fate and transport model (if
>needed)?
>
>10. Please supply the list of input parameters, values, and assumptions
>in deliverable 2 so we can start discussions on these sooner than
>deliverable 3.
>
>11. Clarify whether the preliminary hh risk estimates (referred to in
>4.3.1 top of page 16) involved any food web modeling
>
>12. Table 5-1. Clarify how you will calculate the site-specific input
>parameters (particularly for chemical concs in sediment, and POC, DOC in
>water, etc. see also #2 above. Address means, 95th UCLs, etc.)
>
>13. Pathways. Please add (a) non-resuspension flux to Fig 3-1, and (b)
>incidental sediment ingestion by ROCs to Figs 3-3 thru 3-5.
>
>Do any of the receptors (Fig 3-2) consume phytoplankton?
>
>14. Clarify how porewater input concentrations will be derived?
>
>15. Thanks for good objectives statements and Tables 5-1 and 5-2 (right
>amount of detail for this memo and sets up for our meeting very well)
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>THINGS WE COULD DO ON OUR OWN
>
>1. Check benthic invert tissue concs against range of tissue screening
>concentrations to add residue effects as another check/line of evidence.
>
>2. Add wildlife to food web model (osprey and Great Blue Heron) talk
>with Allison on whether this rises to the must do level - there are
>other approaches to evaluating the bird egg data.
>
>3. Check sediment to clam accumulation based on model (as a check on the
>model calibration)
>
>4. Burt will discuss with Erika (1) the Thomann (energy) vs Arnot/Gobas
>(molecules) models; (2) likelihood that the model will hold across the
>sediment and tissue concentrations found in the LDW
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>**********
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